

AUGUST 1950
FIFTEENTH ANNIVERSARY

Soil Conservation

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SOIL CONSERVATION

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WELLINGTON BRINK
Editor
Art Work by
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STORE VENEER LOGS IN FARM PONDS.—While flying over the Orangeburg Soil Conservation District of South Carolina recently, I noticed farm ponds which appeared to be cluttered with logs. Work Unit Conservationist J. B. Earle satisfied my inquiring mind by letting two local people tell the story.

T. R. Smith of the Limestone community told Earle: "A large gum tree fell in the water of my pond in 1932, and we couldn't get it out. Eighteen years later we pulled it out and found it to be just as sound as it was when it fell into the water. This gave us the idea to store veneer logs in ponds. During certain seasons logging is not possible because of the flooded swamps or bad weather.

"To have logs stored for use during this period prevents a stoppage at the veneer plant. The logs are submerged immediately after cutting and are kept in water continuously until used. Just a reserve of the logs is stored, however; most of them are taken directly to the plant. The pond is constructed to permit the lowering and raising of water quickly to facilitate the placing of logs in the water and removing them when needed."

B. P. Adams, manager of the U. S. Plywood Corp. plant in Orangeburg gave this information:

(Continued on page 16)



FRONT COVER.—The photograph by B. C. McLean is of a 5-row farmstead windbreak 2 miles east of Trenton, Nebr., planted in the spring of 1947. The windbreak follows the contour of the terrace and will serve as protection to a feed lot on the south. Cultivation with a duckfoot and spring-tooth harrow are partly responsible for the rapid growth.

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A FEW REMARKS

ON REACHING A MILEPOST

By WELLINGTON BRINK

THIS is our fifteenth anniversary. The first issue of *SOIL CONSERVATION Magazine* appeared August 1935. There was little then to indicate the sweeping, historic dimensions of the land revolution ahead.

Yet, through these columns, across these pages, piecemeal but endlessly, has moved a stirring drama of agricultural renaissance. Within our time in print, spectacular changes have come to the face of America. We have watched a scene without parallel or precedent in all the centuries of shameful exploitation since man first scratched a furrow to plant a seed. Month by month, through this crowded decade and a half, we have witnessed new knowledge and wisdom emerging and being put to use for crops and ranges. We have reported new plants, new machinery, new implements, new methods, new strategy, developed and applied to the protection of the soil, to the increasing of its returns, to the building of security and hope for all men. We have noted happily first the birth, then the amazing growth in number and versatility and accomplishments of soil conservation districts, those prime examples of crossroads democracy.

Our story has been—is—as much of people as of land. It is a story of *great* people, *great* land, overcoming the wounds of drought and depression, and achieving victory in World War II. It is a story of postwar readjustment; of resolute use of conservation measures to supply the democratic world with materials it needs to stay democratic.

Here, in *SOIL CONSERVATION Magazine*, is provided a forum, a common ground, where we may sift and suggest, and try out ideas, where we may trade information and share problems. For a very long time this was the only publication devoted wholly to soil conservation. Contributors—generous and selfless—have given to these pages a pioneering quality, a devotion, a substance, a color, a sparkle, fairly unique, I think, among

specialized journals. Together, using this medium, our leaders and contributors—technicians, State executives, civic leaders, farmers, bankers, lawyers, ministers, club officials, university presidents, teachers, and all the rest—have helped to educate each other. Through their writings, they have helped to establish and refine the new profession and science of soil conservation. They have as graciously welcomed to their circle the junior engineer as the man already distinguished in letters or scholarship or scientific attainment. Always there has been room for the one with something to say worth saying. Two or three writers of national prominence first tried their wares on the readers of *SOIL CONSERVATION Magazine*. Innumerable others have enjoyed the satisfaction of seeing their writings move out of type and into practical application on farms from coast to coast.

The districts, after the first few years, quite properly took over major headlines, preferred positions. They also made the space in these columns more valuable as the shorter items—the “Notes from the Districts”—began to command eager attention. Each such item contained a worth-while nugget practical elsewhere because it already had been tried and proved.

Veteran readers will recall names, articles, phrases, slogans, even photographs.

Remember?

“The flag is on the plow.”

“Total conservation.”

“Selective service for every acre.”

“Districts ride the range.”

“Democracy in land use.”

“Consider the farmer as well as the farm.”

“The practical soil conservationist talks with a stem of timothy in his mouth.”

Colorful expression has seemed to come natural to many of our writers, their output having the easy flow of clear, unpolluted waters and the rich mellowness of leafmold. Their daring has equaled their facility, and they have never hesitated to introduce to you and me such fearsome



The front cover at extreme left introduced Vol. I, No. 1—August 1935. Covers for August, 1936 to 1942, follow.

but useful words as "ecology," and to repeat their brashness until the words and the public have become fast friends.

Thousands upon thousands of photographs more recently have been made of the impact of a raindrop on the soil, but it was way back in 1939 that *SOIL CONSERVATION* Magazine pioneered with pictures of this phenomenon taken at $\frac{1}{1100}$ of a second by stroboscopic camera at the Massachusetts Institute of Technology.

All parts of the United States, all phases of the soil conservation program, have been represented in picture and text. The cover photographs, and many of the illustrations, often widely remarked upon and put to many subsequent uses, have come from the regular files of the Soil Conservation Service—the work of both professionals and amateurs.

From time to time it has seemed well to get out a special issue, and the series has included such subjects as program, planning, pasture management, engineering, wildlife, foreign soil conservation, vegetation for soil conservation, upstream engineering, Puerto Rico (translated into Spanish), the educational approach, water, and, of course, districts.

Among our district profiles have been A. Threlkeld, Kentucky; Kent Leavitt, New York; Guy A. Leader, Pennsylvania; J. F. Sievers, Massachusetts; Dennis Getchell, Maine; Bob Rutter, Washington; Alfred Wiger, Minnesota; Frank Gyberg, Arizona; Parley P. Smith, Utah; Albert N. Chamness, California; Lloyd Arbuckle, Indiana; Wade E. Eller, North Carolina; J. W. Cornwall, Washington; E. S. Gardner, Utah; Ernest Ritter, Massachusetts; J. Hawley Poole, North Carolina; Silas L. Wright, Idaho; Waters S. Davis, Jr., Texas; and R. B. Webb, Washington. And yet, the "profiles" have contained but a fraction of the total population of our pages.

We have had names well known to book fans: Bromfield, Waring, Forman, Fink, Davison, Van

Dersal, Graham, Sears, McDonald, Waksman, and others. Way back in one of our early years, with some trepidation because of the departure from usual Government practice, we ran two pages of reproductions of Dust Bowl paintings by Alexander Hogue, whose fame was to come later when his work was honored in the leading galleries of Europe and America. We have had governors, cabinet officers, editors, bankers, college presidents, railroad executives, leaders of organized business and organized labor, and—outstandingly, the final authorities—farmers. No house organ, this, in the usual sense. Our magazine has tried to serve as a journalistic town meeting for free discussion of the whole soil conservation theme.

Yes, it has taken a small army of writers—perhaps 800 or more—to make this magazine, to keep our readers abreast of the rapid happenings on the land. And if the magazine has been satisfactory it is because of this able and enthusiastic volunteer "staff" of contributors rather than the one or two editors who have pieced the material together each month.

As for the *next* 15 years: We shall try to step lively—and it will take alert publishing to keep up with the rapid happenings out there on the countryside.

I have thought it appropriate to request an article for this issue from Hugh Hammond Bennett, the one person best equipped to provide a perspective of the past, present, and future of the soil conservation movement. I need hardly remind our readers that it was Hugh Bennett's voice, his science, his dynamic leadership, and his organizational force that is largely responsible for the conservation era in American agriculture.

I asked the Chief to dig a bit into history, to put on paper some of his personal recollections of his long fight for official recognition of the soil erosion problem and his subsequent struggles for a national soil conservation program. This he has done with his usual care, and I commend his article to every thoughtful man and woman.



The march of front covers continues. These August designs are for the period from 1943 to 1950, inclusive.

But a word about the man himself—

Hugh Bennett today is the preeminent world figure, the acknowledged final authority, in the field of soil conservation . . .

He it was, with a few associates, who first discovered the significance of sheet erosion in 1905 . . .

Pounded home to the Nation the appalling erosion situation during the period of his work on the land, 1903 to 1929 . . .

Presented testimony to Congress that resulted in the first Federal appropriation for erosion studies in 1928 . . .

Selected, with his associates, the sites of 10 erosion research stations, then directed the work that developed (a) the world's principal quantitative data on erosion processes and rates, and (b) the principal erosion control measures, in 1929 . . .

Outlined a program for national soil conservation, 1930, and again in 1933, when the Soil Erosion Service was established with Bennett as director . . .

Presented testimony to Congress that led in 1935 to the first soil conservation act in the history of this Nation, and to the establishment of the Soil Conservation Service as a permanent agency of the Department of Agriculture.

From the very beginning Hugh Bennett has guided the Soil Conservation Service: A strict taskmaster—a perfectionist—who nevertheless, by his appreciation of good work on the part of his team, commands a rare brand of loyalty and affection.

SOIL CONSERVATION Magazine is proud to present in this issue its favorite contributor, a man of prodigious authorship, whose works include five books and more than a thousand scientific and popular articles or bulletins on soils, soil erosion, agriculture, and soil conservation . . . a man known to millions, also, as a compelling speaker . . . whose manner on page or platform is humble and genuine.

He was telling me as I went to press a story from the Imperial Valley of California, which illustrates his very special pride in the fact that soil conservation more than pays its way. I think you'd like to have this story, too, just as he told it to me:

In 1940 some people of the Valley came to Washington and told me about their grave problem of poor drainage and salt accumulation. The Service began research activities to determine what might be done to improve the situation.

Our division of irrigation began work, in cooperation with the Imperial Irrigation District, in 1941, looking first to better methods of drainage. Old methods had failed, and our investigators found out why.

First, an underground survey of soil conditions was made down to depths of 9 to 12 feet. This revealed the presence and location of impervious clay lenses, characterized by poor drainage, salty condition, and poor crops or no crops at all, on the upper side of the clay barriers.

Studies of underground water movement were made by the use of new techniques devised by the Service, and a new system of drainage was developed, called the barrier system. This was put into field use after 5 years of research through our division of operations.

Some of the basic elements of the new system are to install tile drains so as either to avoid the impervious lenses of clay or go through them at the narrowest points.

In 1947, 325 miles of tile drains were installed on nearly 20,000 acres. This resulted in outstanding improvement, so much so that in 1948 about 50,000 acres that had produced little or nothing were restored to successful cultivation. Since then the area improved has gone up to approximately 90,000 acres. *Last year (1949) the increase in the value of crops in Imperial Valley was reported at around \$24,000,000.* This was largely due to improved soil conditions resulting from the research and operational work of the Soil Conservation Service.

SCHOOL GAINS.—Vermont reports three new developments in conservation education: (1) The State Department of Education is developing a bulletin on conservation education for use by public school teachers throughout the State; (2) the University of Vermont is offering a conservation workshop at its 1950 summer school, attended mostly by teachers; and (3) State 4-H Clubs will have a State-wide conservation camp at Downer State Forest October 12 to 14.

The *FUTURE* of OUR AMERICAN LAND

By H. H. BENNETT

THIS fifteenth anniversary of SOIL CONSERVATION Magazine provides an appropriate occasion to review some of the events of the past, take stock of where we stand today, and set forth my ideas about the future course of soil conservation in the United States.

Few people, I believe, realize how much progress the country has made in soil conservation. It has been remarkable, even though we would like to see it go faster. I can see it from something of a vantage point, for I have been working with the land for the last 47 years and most of that time has been spent on problems of safeguarding the land and keeping it permanently productive. This is a period covering more than one-fourth of the life of the Nation. In this time more has been done for conservation and prudent use of soil and water resources than ever before in world history. Indeed, it has been within the past 17 years, when we embarked on a national program of soil conservation, that most of the progress has been recorded.

Today I believe there is more reason for assurance about the future security of our productive land than ever before. The fundamental principles as well as the technology of successful soil and water conservation—as now being used and fostered by the Soil Conservation Service—have been well developed. Economically, the value of high quality soil conservation work has been demonstrated over and over again as a paying, dollar-and-cents advantage to landowners, tenants, and the Nation. Socially, the human and governmental machinery for accomplishing wide-scale conservation of soil and water resources without recourse to controls and directives has been successfully tested and developed in soil conservation districts.

Regular readers of this magazine have been able to follow, month by month, the progress of our technology, the mounting evidence of the economic value of sound soil conservation work, and the



rapid development, since 1937, of soil conservation districts; today there are more than 2,200 districts in every State and Territory of the Nation, including more than three-fourths of all the farms and ranches in the country.

There has been a considerable background to all this progress, however, and I have had a personal part in much of it. Four decades ago, in describing the Orangeburg sandy loam, I wrote in the report on the soil survey of Lauderdale County, Miss. (Field Operations, U. S. Bureau of Soils, 1910):

Unfortunately, the type is peculiarly susceptible to ruinous erosion under the conditions of rolling topography obtaining in the area, particularly the southwestern third of the county. If the gentler slopes are not terraced and the steep situations kept in timber, deep gorgelike gullies or "caves" gradually encroach upon cultivated fields, eventually bringing about a topographic condition too broken for other than patchy cultivation. In the steeper situations these gullies have eaten out canyonlike hollows, even through timbered areas, until the Orangeburg sandy loam occurs in many places as narrow, tongue-like ridges reaching out from the higher elevations in all directions. Bridges placed over the heads of these deep gullies are of very common occurrence along the ridge roads. Frequently the gullies, advancing from opposite directions, have completely cut across high ridges, necessitating the construction of bridges. The gullies often have perpendicular walls, sometimes 25 to 50 feet or more in height.

With each heavy rain great masses of soil cave into the gullies from their heads in perpendicular chunks sometimes 10 or 15 feet thick. . . . To check this ruinous erosion slopes must be terraced, seeded to Bermuda-grass, and even planted to trees or rapidly growing and fast-holding plants like honeysuckle. The best way of handling erosion in the case of the Orangeburg soils is to begin, before deep gullies have been cut, to terrace and incorporate vegetable matter. In many of the gullies the advancement can be checked by cutting down the sides so as to get a slope on which to start Bermuda-grass, lespedeza, honeysuckle, or willows, which are good soil binders.

Five years before writing this report, W. E. McLendon and I had discovered the deadly significance of uncontrolled sheet erosion in Louisa

County, Va., where we had been making a soil survey. The facts were duly reported to headquarters, but obviously they failed to impress the authorities, because only a few years later the chief of the bureau wrote:

The soil is the one indestructible, immutable asset that the Nation possesses. It is the one resource that cannot be exhausted; that cannot be used up. (Soils of the United States, USDA, Bur. of Soils, Bull. No. 55, 1909).

At the time, this statement of the chief of the Nation's soils bureau seemed to me to spell the end of all promise of arousing the people of the country to the fact that the very base of their national strength and individual welfare—their productive land—was in grave danger.

I had hoped that we might attract some attention to the danger inherent in continued, uncontrolled erosion by setting forth fact on fact in the soil survey reports we were writing, but these reports were not widely read and actually we had a small audience through this medium. In the soil survey report of Fairfield County, S. C., for example, we reported the astounding fact that in this relatively small county some 136,000 acres of formerly cultivated land had been ruined for further immediate cultivation, with most of the other farmed land suffering from erosion. Nobody paid any attention. It became painfully evident, to me, that much more would have to be done to arouse any extensive interest in the problem.

Opportunities for effective public presentation of the case were limited, to say the least. Even so, one could only plug away, and in 1921 I was still trying to get a response from an audience. That year, in a paper dealing with "Classification of Forest and Farm Lands in the Southern States," presented before the Third Southern Forestry Congress, I said:

Going now from the Piedmont down into the Coastal Plains region, we find in the higher upper and middle parts of that region, frequent small and large belts of land too rolling and rough . . . for farm use, yet pro-

ducing good pine timber. Some of this was formerly cultivated, then abandoned owing to the gullying effects of erosion. The practical abandonment of approximately 25 percent of the area of a single county in west central Georgia is a conspicuous example. One-half of this was classified by a soil survey as rough gullied land and the other half as dense, impervious refractory clay . . . Erosion has so gullied the greater part of this type that there is practically no level land . . . and much of it cannot be profitably farmed.

The rough character of this land, which prohibits tillage operations over much of it, is the result mainly of the erosion that has taken place since the land was cleared for cultivation. . . . There are today on this type many

deserted but substantial farmhouses, abandonment of which was compelled by the ruining of the fields by erosion.

Land of this type is best suited for use as pasture and for forestry. Most of the areas support a second growth of shortleaf pine, although there are many abandoned treeless fields covered with broomsedge.

. . . Some areas are available for pasture, but a considerable total area is not even suitable for this use, as there are many deep gullies with steep or perpendicular sides on which no vegetation can find a footing. Except where some measure is taken to check the progress of the gullies, they extend with destructive effect at a rapid rate. Establishing tree growth in the bottoms of the gullies and thus forming a bulwark for filling in the heads . . . has been found the most effective method of resisting their encroachment upon the cultivated area.



Hugh Hammond Bennett.

This analysis of the land-use adaptability of 95 million acres, printed and distributed in the proceedings of the conference, met with no discernible response on the part of the public. And various other papers and articles dealing with the pressing need for soil conservation received very little attention. I have often wondered how many people read conference proceedings.

Finally, however, in 1928, I began to have a change in luck. That year, with the publication of *Soil Erosion a National Menace* (USDA, Circular No. 33), the public began to take some notice. This well-illustrated publication seemed to strike home. Newspapers and people began to recognize the existence of an erosion problem and to ask what might be done about it. I think the state-

ment that caused the greatest concern was the following, from page 5:

The amount of plant food in this minimum estimate of soil wastage by erosion (1,500,000,000 tons of solid matter annually) amounts to about 126,000,000,000 pounds, on the basis of the average composition of the soils of the country as computed from chemical analyses of 389 samples of surface soil collected by the Bureau of Soils (1.55 percent potash, 0.15 percent phosphoric acid, 0.10 percent nitrogen, 1.56 percent lime, and 0.84 percent magnesia). This is more than 21 times the annual net loss due to crops removed (5,900,000,000 pounds, according to the National Industrial Conference Board). The amount of phosphoric acid, nitrogen, and potash alone in this annually removed soil material equals 54,000,000,000 pounds. Not all of this wasted plant food is immediately available, of course; but it comes principally from the soil layer, the main feeding reservoir of plants, and for this and for other reasons it is justifiable, doubtless, to consider the bulk of it as essentially representing lost plant food, without any quibbling about part of it having potential value only.

From this point on, interest increased steadily. However, it was not entirely spontaneous. I had assumed as a part of my official duty the job of spreading all the reliable information I could get my hands on as far and wide as possible. Receiving no orders to apply the brakes, I made another assumption: that no orders to slow down meant full authority to speed up. I did speed up—and in all directions. There was no word or criticism from any source. On the other hand, I was asked to go here and there about the country to talk about erosion and conservation. I was asked, for example, to speak at Pennsylvania State College. The subject was "Do We Have an Erosion Problem in Pennsylvania?"

I was surprised by the subject assigned—that they were unaware of the problem. I learned that some of those in the audience were surprised, too, but for a different reason. They had not known, before, that erosion had invaded the Keystone State.

In 1927, Howard E. Middleton and I made a very general reconnaissance of erosion conditions in those parts of the United States about which we had little information. I had discovered even before this time that if anything effective was going to be done about controlling erosion, some few individuals would have to spearhead the movement. I mixed in on this part of the job. One thing that seemed absolutely necessary was to get the Federal Government solidly behind a soil and

water conservation movement. Congressman James P. Buchanan of Texas helped make the start. As a member of the Subcommittee on Appropriations for Agriculture in the House, he became interested in getting a Nation-wide program of soil conservation research under way. A. B. Conner, director of the Texas Agricultural Experiment Station had stimulated the Congressman in this interest and on December 18, 1928, Congressman Buchanan called me to present testimony on the subject from a Nation-wide standpoint.

An appropriation was made; and subsequently I was put in general charge of the soil erosion research work in the old Bureau of Chemistry and Soils. Six erosion research stations were established with the first appropriation and four others with funds made available later.

Establishment of the erosion research stations in strategically located areas of the country marked the real beginning of the national program of soil and water conservation. They were the first stations of their kind in the history of the world, as far as I have been able to determine, and they began to produce results promptly.

Thousands of measurements of soil and water losses under different conditions of land, climate, and agriculture were made. This newly acquired information was made public as widely and as quickly as possible. Nothing was buried in bulletins or in the files that could be put to immediate use. Simultaneously there came an upsurge of new ideas and new concepts with respect to the wasteful process of erosion. For my own part, I learned that I had been conservative. Estimates I had made with respect to erosion rates, the removal of soil from fields, and water lost as wasted runoff were shown to be underestimates in practically every instance.

So it was that I had to revise my ideas about the enormity of the soil erosion problem. It was a greater problem, and the time was later, than I had believed.

We not only studied the processes and rates of erosion and water losses from different land conditions under a great variety of treatments, but we carried on numerous investigations with respect to control and prevention.

Later, we discovered that this information was strictly new, not only for the United States but for the world. Careful scrutiny of the literature

revealed nothing in the nature of a similar scientific study of erosion. So the basic information was largely developed, at least at this stage, here in the United States on these erosion research stations. Scientists and others over the world asked for the information and it was given them freely from the very start.

Public interest in erosion was vastly accelerated by this work—so much so that in 1933 a national program of soil conservation was started with an allotment of 5 million dollars of relief funds, under authority of the National Industrial Recovery Act. In the beginning the principal job was to find men who had had any technical experience in soil conservation work. This was not easy. I had found out, in developing a staff for the research stations, that at the time they got into operation there were probably not more than about 50 men in the United States who really understood the meaning of sheet erosion. In the intervening years, some additional men had been trained. So we naturally turned to these stations for whatever help we could get. Then we recruited our staff from experienced agriculturists, who were put to work under our most experienced men. Later, within the Service, we operated training schools for expansion of the Service staff.

Farmers liked the work from the very beginning. After a few months of field experience, we were given additional funds for the program. And later, still more funds. We made some mistakes, to be sure, but our successes vastly outnumbered them. We learned from our mistakes and in addition we intensified our research program. Moreover, we asked the plant specialists to bring into our conservation nurseries every plant in the country that appeared to have any promise for fitting into any particular useful niche in the soil conservation program.

Out of this nursery and research work, along with our farm experience in soil and water conservation, we steadily refined and improved the program with every additional bit of information and every new plant that proved worth while. Work moved along so rapidly from the research stage into the operational stage that some people became confused about the real sequence of events. There were those who thought the dust storms, current at that time, were responsible for starting

the big soil conservation effort. The dust storms helped to stimulate interest in the program, to be sure, but the program had been going nearly 8 months when the first great duster of May 12, 1934, blew across the country from the heart of the Nation to blot out the sun over the Capitol at Washington.

Then the Seventy-fourth Congress took us in hand, and set us up under the first soil conservation act ever passed by any great Nation that we know anything about. This was the Soil Conservation Act of April 27, 1935, Public No. 46, Seventy-fourth Congress, which reads as follows:

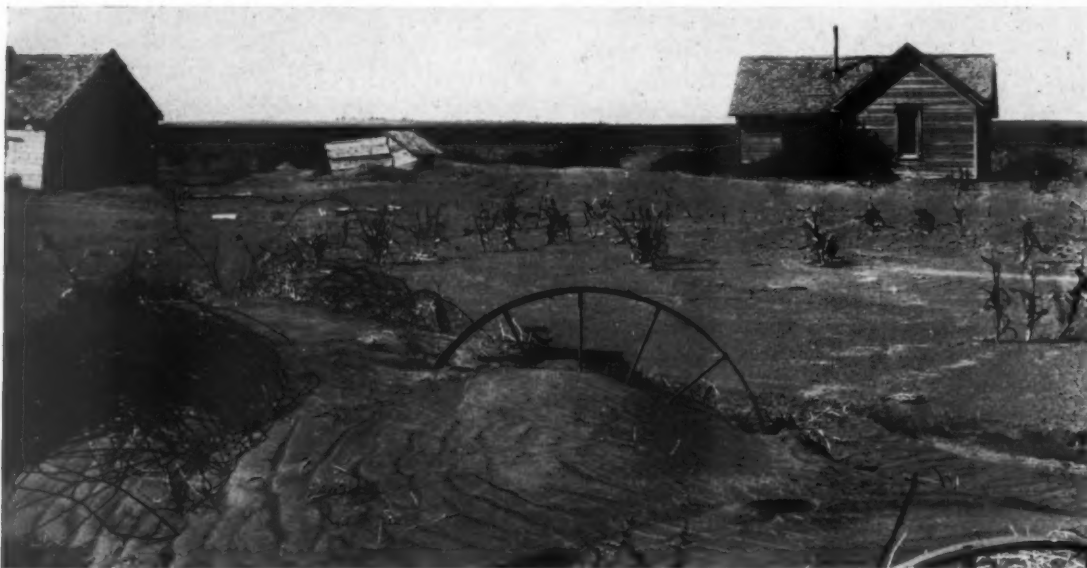
Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That it is hereby recognized that the wastage of soil and moisture resources on farm, grazing, and forest lands of the Nation, resulting from soil erosion, is a menace to the national welfare and that it is hereby declared to be the policy of Congress to provide permanently for the control and prevention of soil erosion and thereby to preserve natural resources, control floods, prevent impairment of reservoirs, and maintain the navigability of rivers and harbors, protect public health. . . .

This act established the Soil Conservation Service as a permanent agency in the Department of Agriculture.

Since then, through the drought and depression of the 1930's and the war and postwar periods of the 1940's, the soil conservation movement and the program of the Soil Conservation Service have made steady progress. Over and over again, under a wide variety of circumstances and needs, the usefulness and value of scientific soil and water conservation work has been proved. In dry years, it helped conservation farmers store water in the soil to bring their crops through drought to harvest in good condition. In exceptionally wet periods, it has demonstrated its effectiveness in slowing down rapid and wasteful—sometimes ruinous—runoff of water that would have contributed to flood peaks. In times of crop surpluses, it has provided the farmer with a sound basis for making desirable changes in his production, often toward greater diversification, and with a reduction in the per acre cost of production. This kind of modern soil conservation work has meant better net income per acre to thousands of conservation farmers and also better net income per farm. In times of need for greater volume of production, as during the war, soil conservation work proved its effectiveness again. By using land more effi-

ciently and by preventing erosion and needless loss of water, fertilizer, and seed, conservation farmers were able to increase production per acre and per farm. Nation-wide, conservation farmers were able to increase their production by a third or more on the average, and many individual farmers were able to accomplish 50, 75, and even 100 percent increases in volume.

tual work on the land is only one part of what is necessary to bring about and sustain the conservation of land and water resources. Not the least of several other essential elements in successful, lasting conservation is the persistent, patient work to help farmers, ranchers, and others understand with some clarity what conservation farming is, why it is necessary, and what is required to start



There is no joy of living here. Soil conservation goes far beyond mere mechanics; it proceeds in harmony with the whole meshwork of natural laws. And the ultimate benefit reaches beyond crops to the people themselves.

In the 1930's and even into the early 1940's, we were obliged to devote a considerable amount of time to educational work, preparatory to actual conservation work on the land. This was a slow but necessary activity, and it served to hold down the annual rate at which conservation measures were being applied. It did not mean, however, that conservation progress was slow. The education of farmers and ranchers in the forms and consequences of uncontrolled erosion, as well as in the practical means available to achieve permanent conservation, are vital preliminaries to actual work on the land. Without such understanding on the part of the landowners, conservation measures would not be properly applied and certainly they would not be properly maintained.

In different words, I am saying that the number of farm plans prepared, the number of acres terraced, and the number of farm ponds built are not the only gage of conservation progress. Ac-

it and keep it going on a sound basis. And inasmuch as this type of work has required changes in traditional habits of thinking and doing things as well as the somewhat delicate task of readjusting some social customs, it was—and is—probably the most difficult part of getting a national soil conservation program under way.

All the conservation science in the world will not get one acre of privately owned land in this country protected against erosion, drained of excess water, or used in accordance with its physical capability unless the landowner wants it done and knows why he wants it done.

So in measuring what has been accomplished to date, the educational work we have done ranks near the top of the list. And in fairness to the Soil Conservation Service and its men who were largely untrained in this field, it must be noted that for years they carried on with little or no help, as a general rule. I can remember clearly



This lad looks out upon a happy future—a land productive, safe, and beautiful.

some venerable individuals who contended, in the face of thousands of acres of gullies in their States, that erosion was no problem within their boundaries. There were others who would have nothing to do with the program because they had not originated it; still others actually opposed it either because of reasons mentioned above or because they decided, somehow, that it was a political program.

There are still a few obstructionists, and I suppose we must be reconciled to them in soil conservation as in every other field of endeavor, but with each passing year the Soil Conservation Service program has won more and more active supporters. Today the program is one of the most popular and most widely praised of governmental activities. The program has not been a source of trouble and its backers can be found in both major political parties and among conservatives and liberals alike.

This did not just happen. We sacrificed, and I believe wisely, a more imposing record of accomplishment on the land, to bring about a widespread understanding of the need for conservation and its values. In recent years this early educational work has been paying off in physical accomplishments. In the fiscal year 1942, comprehensive conservation treatment, on the basis of scientific farm conservation plans, was completed on some 5 million acres. In the fiscal year 1949, our accomplishment had increased to 22 million acres.

The charge is being made nowadays that although we are doing a very good job, we are going too slow and do not reach enough farmers each year. This, of course, raises a question about the meaning of "slow." If we were willing to reduce the quality of our work, we could undoubtedly build more terraces, farm ponds, drainage ditches, and diversions every year. We could, by abandoning the fundamental principle of treating each acre according to its needs and using each acre according to its capabilities, vastly increase the total acreage of contouring, stubble mulching, strip cropping, and dozens of other conservation measures. But what value would this work have? How long would it last?

Speed in soil conservation work can only be measured in relation to quality. At the present time, for example, it is taking 24 working hours, or 3 days, for one of our technicians to prepare a farm conservation plan, as a Nation-wide average.

I have serious doubts whether a sound plan can be developed in less time.

I will agree—and as a matter of fact I have been saying for years—that we are not going fast enough. We most certainly need to move ahead faster; the rate of land damage still exceeds, in the aggregate, the rate of land protection. But it would be folly and waste to increase speed at the expense of quality. It would be something like trying to build good automobiles with inferior parts, or with some of the essential parts missing. You could build more automobiles that way, and build them cheaper, but the flaws would show up quickly and then few people would want to buy.

As a matter of fact, the present program of the Soil Conservation Service is moving ahead faster than most people recognize. We are now treating in the neighborhood of 25 million acres a year and simultaneously we are proceeding with farm conservation planning on a somewhat comparable acreage. Work continues on the National Land Capability Inventory and each year, as a result, we know the land facts about an additional 30 million acres. At the same time there is continued progress in education and research.

By any objective appraisal, the Service and the national soil conservation program have come a long way within the 15-year life of this magazine. We have made a most substantial beginning, not only in terms of actual accomplishments on the land but, equally important, in winning the confidence of farmers in our ability to help them with a constructive and necessary job. The biggest part of the job still lies ahead. More than three-fourths of the area in need of conservation treatment is still untreated. But our principles are sound, our quality of work has been maintained at high levels, and our support continues to grow.

If the Service is allowed to proceed with the present program, maintaining the same high standards, basing the work on the needs and capabilities of the land itself, and utilizing the strength of democracy and organization inherent in soil conservation districts, the United States in due course will become the first large nation in the history of the world to succeed, by its own efforts, in achieving a permanently productive agriculture.

It took 45 years from the discovery of the significance of sheet erosion to get where we are now

(Continued on page 15)



My sincere congratulations to Wellington Brink and all other members of the staff of SOIL CONSERVATION Magazine on the fifteenth anniversary of the founding of the publication. Over the years, SOIL CONSERVATION Magazine has served effectively both as a disseminator of popular information on soil and water conservation, and as a semitechnical journal in which rapidly developing research results have been spread among professional workers. SOIL CONSERVATION Magazine is, I think, the best of all Government periodicals.

MILTON S. EISENHOWER
President, Pennsylvania State College

Your SOIL CONSERVATION Magazine was already a year old, or a little older, when Glenn Rule, Elmer Rowalt, and I were recruited into the Service to assemble, as writers and editors, its first popular bulletins, such as *Crops Against the Wind*, *Soil Defense in the Piedmont*, and *To Hold This Soil*.

We relied greatly in those formative years on the truly pioneer work in assembling and presenting information that Wellington Brink was doing, under the guidance of Chief Bennett. And now, 9 years along on another job of editing, *The Land*, I find SOIL CONSERVATION Magazine an even more spirited and reliable trail blazer than I did then. It is the best Government periodical I know.

So I think that all of us who have grown—or are growing—gray in the SCS and related services, governmental and private, should hail your fifteenth birthday with gratitude and affection.

RUSSELL LORD
Editor, *The Land*

Foreign Agriculture magazine takes pleasure in adding its congratulations to SOIL CONSERVATION Magazine upon its fifteenth anniversary. It has helped SCS to perform outstandingly in bringing new consciousness of proper soil use to the United States and in making its leadership felt throughout the world. SOIL CONSERVATION Magazine can justifiably be proud that in every country today there is arising a new feeling of responsibility toward the life-giving resources of the soil.

ALICE FRAY
Editor, *Foreign Agriculture*

Greetings to teen-age SOIL CONSERVATION Magazine on its fifteenth birthday and to the durable Wellington Brink who has guided its destinies from birth to date, from the editor of a thin fortnightly that bore February 6, 1942, as its natal date.

T. SWANN HARDING
Editor, USDA

The fifteenth birthday of SOIL CONSERVATION Magazine is a good time to give well-earned recognition to the role it has played in conservation accomplishment.

For its forthright delivery of the soil conservation message, for the stimulation it has given to soil conservation thinking, for the service it has rendered as a reference source for soil conservation speakers, writers, and teachers, my congratulations—and for the future, my best wishes.

KEITH HIMERAUGH
Director of Information, U. S. Department of Agriculture

Congratulations to SOIL CONSERVATION Magazine, 15 years old today.

Congratulations, too, to the Soil Conservation Service, the junior partner of each soil conservation district.

In 15 years the district movement has grown from scratch to where now it covers 80 percent of the farms of America. This voluntary growth is phenomenal.

It came about because American farmers appreciated the opportunity of running their own agricultural program. They are enthusiasts for the Soil Conservation Service for two reasons: (1) The high quality of the technicians of the SCS and (2) the extreme care the Service has exercised in *assisting*, but not *running* these 2,200 soil conservation districts.

Happy birthday from the grass-roots democracies—soil conservation districts!

WATERS S. DAVIS, Jr.
President, National Association of
Soil Conservation Districts

I was surprised to learn that the August issue of SOIL CONSERVATION marks the fifteenth anniversary of this very fine magazine. It has, during those years, done much to create a realistic understanding among its readers of the problems and needs of our land and water resources. The results are in evidence on millions of acres of land throughout the Nation.

SOIL CONSERVATION Magazine and the Soil Conservation Service which it represents have, among many other things, helped to bring about the development of a great conservation movement. It is equal in character and force to other great movements including religion and education. This in itself is highly significant because it is world-wide in scope. It is so because of the crusading spirit and technical skills preeminent in the hearts of the men in the organization which SOIL CONSERVATION Magazine represents.

Your magazine has also helped to champion another great cause—soil conservation districts. These districts are as fundamental to conservation as democracy is to



our concept of government. Every effort must be made by governmental workers and others to work with these districts in order that conservation in all its aspects will have permanent leadership and value. The articles and brief items in *SOIL CONSERVATION Magazine* are materially contributing to this very important phase of the conservation movement.

The task ahead, however, is still big and challenging. We will all continue to look to you for wisdom and guidance because of the skills and research so necessary to build our land resources that are at your command.

Congratulations too—from the Editorial Board of the Soil Conservation Society of America.

WALTER C. GUMBEL

Editor, Journal of Soil and Water Conservation

One of the greatest tasks ever undertaken by Government has been that of reshaping land use in order to conserve soil and moisture. This has involved changing the viewpoints and daily work habits of countless individual farm families and landowners, on a *voluntary* basis.

To accomplish this end, the soil conservation district laws have furnished a mechanism thoroughly in keeping with American tradition. But any mechanism requires motive power to make it effective. In this instance the motive power must come from enlightened public opinion. By presenting, in attractive and intelligent form, reliable information as to what is being done, *SOIL CONSERVATION Magazine* has helped to mobilize power for an amazing social and economic change. Sincere congratulations on 15 years of solid accomplishment!

PAUL B. SEARS

Chairman, Department of Botany, Oberlin College
Author, *Deserts on the March*

Hugh Bennett is in charge of the most important work in the United States. The United States is a piece of land. On this land we live and when it is gone, we, too, are gone. We have no recourse but to live on land. For some strange reason, a large proportion of our citizens have the short viewpoint of the cow, and think not of the future. Therefore, they waste our *one really vital resource—LAND!*

It has been a heartening experience to a born conservationist like myself to see the Soil Conservation Service rise and grow in its work and the idea of conservation grow in the American mind and spread to the American farm! And your journal carry the light into dark places!

I cannot think of any other person who has done so much to save our land as the tireless and indefatigable Hugh Bennett. May he live long and prosper! To him prosperity would be a chance to serve. He had the luck

to start with almost nothing and could build up a service. Then he had the further luck (skill or wisdom) to get more than his share of enthusiastic helpers.

J. RUSSELL SMITH

Professor, Economic Geography, Columbia University

Congratulations to a magazine that represents so ably the best of all the services. To my mind, the Soil Conservation Service is rendering to the people of the United States a performance so competent and so dignified that it stands as a shining light in the field of government.

Because it subordinates itself so well to the primary conservation task being performed through the locally organized and controlled soil conservation districts, its service is unusual.

Although it asks for little credit, it deserves much. And although I hold the chief, Dr. H. H. Bennett, in highest esteem, I think that the strength of the Service now is in the unusually high quality of the individual men in the field. It is a remarkable force of men, basically unselfish and deeply devoted to the greatest crusade now challenging the hearts and minds of man.

WALTER R. HUMPHREY

Editor, The Fort Worth Press

You are about to close volume XV of the fine magazine *SOIL CONSERVATION*, which from its birth has consistently recorded the spectacular advance in wise land use spearheaded by the Soil Conservation Service. We still see widespread violation of the principles SCS has promulgated and your journal has effectively presented, but now the general public recognizes them, which wasn't the case 15 years ago. One of the big gains, it seems to me, is the general realization that work and money spent on sound conservation plans are not just added costs in farming; they are the soundest, most profitable investment a farmer can make.

Congratulations on *SOIL CONSERVATION's* birthday, and continued success to your crusade!

CHESTER C. DAVIS

President, Federal Reserve Bank of St. Louis

The staff of *Rural Electrification News* extends hearty felicitations to its sister publication, *SOIL CONSERVATION Magazine*, on the fifteenth anniversary of its establishment as official news organ of the Soil Conservation Service. During this time, *SOIL CONSERVATION Magazine* has rendered yeoman service to the cause of American agriculture and has contributed greatly to the journalistic standards of agricultural publications.

We wish for Wellington Brink, editor, and his staff continued success in their undertaking.

W. HAROLD HAYES

Editor, *Rural Electrification News*

Fifteen years old, eh? Why, you're just a boy, a sophomore. It takes 15 years just to make grass feel at home in a new environment. A 15-year-old tree is only a sapling. It takes 15 years to get the friendly earthworm back in the soil even with good treatment.

Sure, you've made an enviable start, gotten some of the obstacles out of the way, cleared up the outlines, made friends. But wait till you've got some age on you, another 15 years. We'll see something then, some water tables raised, watersheds nailed down, whole areas farmed the conservation way, continents of land revitalized and put to work for man.

Yes, we're proud of you for what you've done and are, but more proud over what you're going to be and do. "The best is yet to be."

CHANNING COPE
Author, Front Porch Farmer

There could be no greater public purpose in the United States than to promote the conservation of the soil. As you know, the Forest Service has wholeheartedly cooperated with your bureau, since its inception, in that high enterprise. The fifteenth anniversary of SOIL CONSERVATION Magazine is a fitting occasion for congratulations. You should feel gratified on looking back over 15 years of publishing one of the most solidly valuable Government periodicals.

ROBERT T. HALL
Editor, Forest Service

Congratulations to SOIL CONSERVATION Magazine on its fifteenth birthday. Twice your age, we have followed the progress of your publication and feel proud of the attractive and readable standard it has always maintained. Developing in an important and significant field, it has made a real contribution to national welfare. May the magazine and its able editor have many more years of service.

CLARA BAILEY ACKERMAN
Editor, Extension Service Review

The Future of Our American Land

(Continued from page 12)

with our national program of soil and water conservation. There is no other way to provide adequate safeguards for the land. There are various ways of helping along with the job, but for lasting conservation the land must be treated according to kind and need.

Therefore, I hope for the everlasting good of the Nation nothing will be permitted to interrupt or delay this conservation program of the people of the United States.

DISTRICT PROFILE

CLAUDE MEYERS
of
OREGON



Claude Meyers.

Outstanding in a country where everything happens on a grand scale—including soil erosion—Claude Meyers has earned the reputation of being "one of the fight'n'est soil-savers in Oregon."

This "native" Oregonian was born in Pottawattamie County, Iowa, but headed West with his parents at such an early age he doesn't remember much about it.

Claude Meyers is a genial, soft-spoken man who likes to go around in bib overalls and elbow-length shirt sleeves. He dresses this way in all kinds of weather, leading one to believe that he carries some internal and secret fire to keep him warm. Certainly he has fire, energy, and boundless enthusiasm.

Meyers spends most of his time at his 2,300-acre wheat ranch near Echo, Oreg., where he keeps fifty-odd pieces of machinery in top shape and supervises the field work of his two oldest boys, Marshall and Peter, and the hired help.

But he finds time for other things, too.

He is treasurer of the West Umatilla Soil Conservation District and secretary of the Oregon Association of Soil Conservation District Supervisors. He was active in the formation of the association in 1948. Meyers is a director, past director, or member of more than 10 farm organizations, including the Oregon Wheat League and the Umatilla County Land Use Planning Committee. Many of his wide and varied interests are shared by his wife, Frances.

The Meyers family includes two daughters and three sons. The elder daughter, Helen, is a nurse in the Multnomah County Hospital in Portland. Little "Pat"—short for Patricia—attends grade school at Pendleton. Marshall and Peter help their father full time at home, while Wayne, the youngest son, is a senior at Pendleton High School.

Claude Meyers' sense of what is right often takes him into controversy. For example, a year or so ago he became convinced that Oregon farmers would benefit from a change in the State soil conservation district law. Not without opposition, he pressed the issue at the biennial session of the State legislature, thus helping to bring the enactment of an improved law which may make it easier for Oregon farmers and ranchers to organize for soil conservation work.

Claude is proud of the fact that his father began to experiment with stubble-mulch farming as early as 1917. Back in those days when the moldboard plow was king, the idea of handling wheat straw on top of the soil to control erosion seemed revolutionary. Nevertheless, thanks in part to Meyers' trail blazing, the practice is widely accepted today.

Many wheat-growing sections of eastern Oregon, including the Meyers ranch, are in the path of winds which often blow with incredible violence. Annual rainfall averages about 10 inches.

Claude tailors his farming operations to suit these conditions. Besides following a grass-wheat-fallow crop rotation—the fallow being required every second year to conserve soil moisture—he adheres strictly to the kind of cultivation that leaves the stubble on top. As an added precaution he farms 673 acres in a system of cross-

wind strip cropping. These 2-mile-long strips give his fields the appearance of a huge American flag.

Claude runs his life by the simple rule that you can get anything done if you try hard enough. Right now he wants the people of Oregon to know more about their soil conservation problems. "Many of our troubles in the past," he says, "were due to the fact that our people simply were uninformed." He wants to change all that.

And knowing Claude Meyers, we think he will help do it.

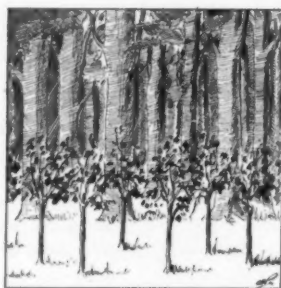
—ROBERT E. SWANSON

VENEER LOGS

(Continued from page 2)

"At present we are storing logs in only one pond. We have about 150,000 board feet stored, which will operate the plant for 8 to 10 days. We are considering building a big pond to store 1,000,000 board feet, which will be enough to operate the plant for 3 or 4 months. During hot weather we were afraid the logs would dry out and crack or otherwise spoil, so we decided to try storing them in a farm pond on an experimental basis to see how they would keep. We know that they will keep in good condition for at least a year."

—Cal Roark.



BANK OWNS TREE PLANTER.—The City Savings Bank & Trust Co., DeRidder, La., purchased a \$1,000 tree-planting machine for the free use of farmers in its parish.

The machine plants 10,000 seedlings a day.

Out of 2,000 farms in the area, about 500 had tree-planting programs last year, Herbert H. Pye, the bank's executive vice president said in an article in *Burroughs Clearing House*. Demand for seedlings exceeded supply with 331,000 being set out by the planter.

Pye points out that the immediate rise in the value of the farm more than offsets the cost of planting. He estimates that \$15-an-acre land, on which trees are planted, will sell for \$30 to \$35 an acre in 5 years. And when the farmer's capital increases, so do deposits in the bank.

James B. Adkins, Soil Conservation Service technician, and County Agent Ralph R. Brown supervise use of the machine.

SCHOOLS AND FARMS ARE PARTNERS IN JACKSON COUNTY



All branches are represented in classes. This group at Ravenswood includes Jack Tate, Navy, instructor; R. H. Stallings, Seabees; R. L. Sharp, Marines; R. D. Kester, Coast Guard; J. C. Skeen, Army; George Hendershot, Air Force; and Warren Nesselrod, Navy.

By HUGH F. EAMES

THE conservation work of veterans in GI classes at Ripley and Ravenswood, in Jackson County, W. Va., has led to a remarkable county-wide educational innovation. Thirty-eight hundred boys and girls, from first graders to high-school seniors, are now studying soil conservation. The new pattern is spreading to other county school systems.

Set up in 1947 to help World War II veterans get a better start in agriculture, the new training course has been developed into a program designed to lift the living standard of 16,000 people in a 461-square-mile area. The accomplishments of 254 veterans and more than 200 vocational agriculture students in two high schools have brought

conservation farming practices to 458 farms containing 71,541 acres—28.3 percent of the land in farms in Jackson County. Indirectly, the program has influenced other farmers to request technical help in applying similar practices. One result is that the number of Jackson County co-operators in the Western Soil Conservation District who have complete conservation farm plans had increased to 376 by the end of 1949.

This success stems from close cooperation of the Jackson County school system, the Veterans Administration GI training coordinator, the Western Soil Conservation District, and the Agricultural Council of Jackson County—a group representing all the National, State, and local agricultural agencies operating in the county. Working effectively with these groups have been Walter Gumbel, conservation specialist for the West Penn Power Co.; representatives of the State Depart-

NOTE.—The author is in current information, Soil Conservation Service, Upper Darby, Pa.

ment of Education and West Virginia universities and colleges; and farmers already operating the conservation way.

The establishment of the conservation course for Jackson County veterans had been under development for several months when the Jackson County Agricultural Council was organized with the agreement that "all agencies and workers in agriculture will talk the same practices when dealing with farmers in the county, and will work up a program and recommend practices that every worker will follow and use in contacts with farmers and others."

Most agencies in the council already were at work for conservation. The county agent was handling education; the Production and Marketing Administration was supplying lime and fertilizer and making benefit payments for specific practices; Soil Conservation Service technicians were, of course, deep in the district program; veterans and other farmers affiliated with Farm Bureau and other agricultural organizations had land that urgently needed conservation treatment; and the GI coordinator and the schools had instructors and teaching facilities. The opportunity to work with groups rather than individuals was unusually attractive.

There were 160 veterans in classes at the 2 high schools. Their average age was 26. Nearly all were married, most wives, like their husbands, being farm-reared. Some had children. One hundred thirty-four already owned or were buying farms. Twenty-six others lived with parents or relatives or worked for farmers who had complete conservation farm plans.

The veterans were organized in classes averaging 25 members. Their instructors were veterans with agricultural and teaching backgrounds. There were 4 hours of classroom work per week—two evenings and Saturday afternoon—and a 2-hour visit to each farm by the instructor. The school district and the GI training coordinator employed the teachers.

In early 1947, when the project got under way, the instructors had the cooperation of council members and guest speakers. Late in the year each veteran received a land-capability map and an assignment to make a revised land-use map and a complete conservation plan for his farm. Instructors and SCS technicians worked with them individually on this.

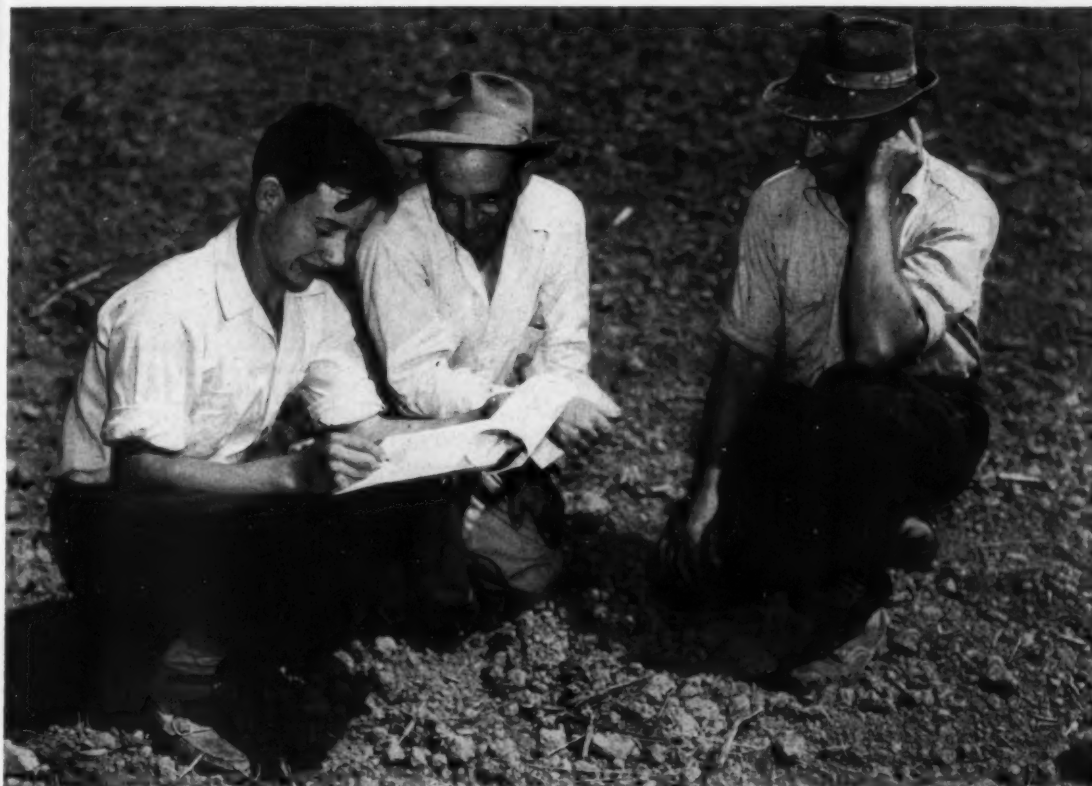
During this period a 2-day school for instructors was conducted by SCS technicians, district supervisors, and others. It included field demonstrations of planning farms and installing practices, particularly those that the farmer could establish with his labor and equipment. There were visits to farms where conservation practices had been in effect a long time.

It was not until April 1948 that the Western Soil Conservation District and SCS technicians began a check on progress. By August, through visits to farms of 134 GI's for which plans had been developed in classroom work, Ben Speicher, SCS farm planner, had found every veteran waiting to become a district cooperator. Each knew something about the needs of his farm, what he wanted to do, and what he had to work with. Some, not waiting for official approval of plans and agreements by the district, had already installed practices on their land.

All this was a big timesaver. Through use of the information already compiled by each veteran it was possible to check his planning quickly and make necessary changes, and to obtain cooperative agreements on as many as three farms a day instead of the usual one. Here was the first "complete conservation sign-up" by any GI agricultural training group in the State.

The program was a big stride ahead in West Virginia. In Jackson County the previous average had been less than 50 new district cooperators a year. The system brought 140 new complete conservation farm plans to the county in 1948 and was the big impetus in pushing the total to 376 conservation farmers in 1949.

Veterans did more than accept plans and sign district agreements. They quickly started to put these plans to work on their lands, installing most practices with their own labor and what equipment they had or could borrow from other farmers. Some of them rented district equipment and a few employed contractors who work with the district to do the jobs that most farmers cannot efficiently handle, such as building farm ponds and diversions. Progress in 1947, 1948, and 1949 indicates that these young farmers will have their complete plans on the land in 2 to 3 years. As a result of all this activity, school authorities report, veterans had installed on their farms as of December 31, 1949:



When planning of parents' farms is completed, vo-ag boys are required to obtain parents' acceptance. Here W. N. Rhodes (right), father of Charles (left), proudly waits to sign cooperative agreement with district, after they and Ben I. Speicher of SCS have checked the final points in the plan the lad has made.

18,170 linear feet diversion ditches.
 2,163 acres pasture improvement.
 6,466 acres pasture mowing.
 1,000 acres cover cropping.
 12 acres pasture rotation.
 442 acres clearing and obstruction removal.
 1,416 acres alfalfa seeding.
 50 acres mulching.
 1,125 linear feet sod waterways.
 2½ acres tile drains.
 52 gullies controlled.
 41 springs improved.
 19 farm ponds.
 14,263 linear feet stream channel improvement.
 7,000 linear feet stream banks protected.
 61 acres wildlife food and cover.
 638 acres woodland protected.
 20,000 linear feet multiflora rose hedge planted.
 32½ acres new woods.

In ringing up this record, veterans received assistance from GI instructors and Paige Corbin and Jarrett Newlon, SCS technicians.

Progress through veterans classes has opened areas containing many farms where the district had never before been able to get a foothold. It has attracted the interest of nonveteran farmers and paved the way for their becoming district co-operators. It has enabled veterans to make better use of their land, put their work on an organized basis, increase their per-acre production, reduce operating costs, and earn more money to speed payment for their farms.

In the opinion of Wayne Hughes, a district supervisor, farmer, and former teacher, "the conservation program with the GI's has given Jackson County agriculture the best boost it ever had." He says most veterans who are buying farms have a reasonable chance to be successful, because only a few have made bad buys. Some are carrying stiff loads but can handle them, he comments. A



In first grade at Ravenswood, milk is one of the mediums through which the soil conservation course is introduced.



Mrs. Gertha Castro encourages her fifth-grade youngsters to collect Nature's specimens, study them, and write compositions about them. This is a class in Ripley.

powerful factor in their success, he says, is their background and their wives' background in agriculture. Of the 160 veterans who started in the classes, only 5 have withdrawn, and some of them—those who left because they lacked funds—will be back when they have laid a bit aside from other employment. According to Hughes and others, the program will reach its maximum results in perhaps 20 years, but the over-all benefits will begin to be apparent within 10 years.

Effective in spurring veterans to top accomplishments have been such experienced farmers as E. G. Wolfe and professional people like Dr. Gay H. Duke, county veterinarian. Wolfe has seen conservation farming pay solid dividends at his 132-acre farm. "Don't wait until you earn the money you need to establish complete conservation farming. Go out and borrow it, and don't worry about the loan. Conservation farming will pay off the



A tomato party is a good conservation vehicle for second graders taught by Miss Lourie Smith. Tomato seeds are planted and developed in classroom, then transplanted to paper cups and taken home for replanting in family garden.



When they enter sixth grade, boys and girls start to learn about farmers and their operations—what a good farmer does. Lloyd Stone here explains four of the most important things in efficient farming.

debt and yield you good dividends at the same time," he has told the veterans, who include his own son. Dr. Duke has helped by emphasizing that two-thirds of livestock ills in Jackson County are due to malnutrition resulting from lack of essential elements in feed produced on the farms.

Through 1949 the vets' program continued under full steam. Eighty-five more veterans joined classes, made farm plans, and became district co-operators. There has been no lessening in their interest because the longer they continue, the more they feel benefits from conservation farming. Some are putting extra earnings into herds and switching from livestock farming and cropping to dairy operations, a movement that is steadily mounting in West Virginia. Indications point to continued growth in classes, but at slower rate.



In third grade of Mrs. Nellie Hughes the study spreads to trees. A live one is used, and others show up in art work.



Seventh-grade pupils under Melvin Horn at work building farm models which incorporate some of the things they have learned about conservation farming.

The program has produced a variety of results. All veterans whose soil shows deficiencies are enrolled in PMA's lime and fertilizer program and are receiving benefit payments for installing specific conservation practices. Those interested in grassland farming receive the assistance of the county agent and other Extension workers. They also have help from a State Conservation Committee forester and game technician.

With the attack well launched among the veterans, organization of a like course for vocational agricultural classes was started in two high schools. By February 1948 a well-organized course was ready for 126 boys—86 at Ripley and 40 at Ravenswood. It was built around the requirement that each vo-ag freshman, as his initial assignment, must make a complete conservation farm plan for the home farm and get it accepted by his parents, if a plan was not already in opera-



In the fourth grade, pupils study construction of plants, grass, and trees in drawing and painting, with Mrs. Dorothy Gillett teaching.



Eighth graders in the Sandyville school here are shown sloping, liming, fertilizing, seeding, and mulching eroded bank next to school athletic field. Ground work is done by boys, planting by girls, under direction of SCS technicians.

tion. Where there was a plan, a revision to meet current situations was required.

This course produced 54 new farm plans the first year and is expected soon to yield 100 annually. The boys' acceptance of the course is seen in increased enrollment that already has required an additional teacher at Ripley. At the start, 126 boys in conservation classes represented 17,320 acres. By November 1, 1949, the number had increased to 204 representing 27,560 acres.

In addition to classroom instruction, students have considerable field activity in which they help plan, lay out, and install practices under guidance of teachers and SCS technicians. They go on tours, sometimes to other counties, to see conservation practices at work under varying conditions and to talk with farmers about their experiences and benefits.

Ravenswood and Ripley classes have small nurseries where vo-ag boys raise tree and shrub planting stock, including multiflora rose, for use of district cooperators. Also they build knock-down forms that conservation farmers and SCS technicians use in building farm livestock watering troughs near ponds and springs. Their interest in all phases of agriculture is expanding. More trees and shrubs were planted on Jackson County farms in 1949 than in six previous years.

With GI and vo-ag conservation courses moving ahead, school administrators, soil conservation district supervisors, and the agricultural council, under the general leadership of Delmer K. Somerville, assistant county superintendent of schools, began to build a conservation course that would do a heretofore unheard-of educational job; it would begin with first graders and carry them into junior- and senior-high vo-ag work.

State educators, college and university heads, conservation experts from Government and private enterprise, district supervisors, council members, school administrators, teachers, joined in planning. They finally whipped together a course that won unanimous approval. It was given a test run in the spring term a year ago.

Inasmuch as 80 percent of the school population comes from Jackson County farms, the course is designed as an indirect, long-term program to develop aptitudes, knowledge, and skills that will be effective in expanding conservation farming in coming generations. Nearly 3,000 boys and girls in the grades have been brought into the program during its first full year. The school rooms and grounds are their laboratories. In the higher grades they have opportunities for field observation. Soon perhaps—and this is no idle dream—there will be a school-district conservation farm at which they can study during earlier years and operate in high-school years. With the start of the new school year last fall the course was being taught to 2,993 boys and girls in the 70 elementary schools, and 891 pupils in 1 junior high school and 2 senior high schools.

"In elementary grades," Assistant Superintendent Somerville says, "much of the course is integrated with such regular subjects as spelling, arithmetic, art, writing, geography, science, and history. It differs from the secondary school program in that no effort is made to lay out soil-saving practices and put them on the land.

"We expect to have a fuller development next year, after we have had a year of teaching experience in all grades. More and more teachers are taking hold of this course, and other schools—sometimes as many as four or five counties in joint meeting—are asking for our help in getting started on a like program. We are highly pleased with the activity as it grows and spreads."

The vets are pleased because they have developed peace-time leadership, set a pace for others, and at the same time they are managing to do a better farming job.

NOTES FROM THE DISTRICTS

DISTRICT TEACHES TOWN.—The Orleans County (Vt.) Soil Conservation District has purchased a tract in the town of Westfield for use as a demonstration forest area. North Troy vo-ag boys have set out approximately 1,400 white pines in the 2-acre tract.

UNIQUE AGREEMENT.—Allegany County (N. Y.) Soil Conservation District has just uncorked something new by making a working agreement with itself. This agreement covers conservation work—particularly stream-bank maintenance on the bordering river—on property leased for the district shop. Under the district's agreement with itself, SCS technicians have prepared plans which include a revetment of willow trees.

SMART PROMOTION.—Door prizes at the annual meeting this year of the Clinton (Ill.) Soil Conservation District were two 2-acre pasture-improvement plots. The winners were T. C. Gamble and Wayne Maschoff. Money for seed and fertilizer was donated by banks in the district. The winners select the plot to be treated and do the work. The plots make good demonstrations for the neighborhood and will be visited by groups on tours.

Banks in the district also paid for pencils which were given to all who attended the annual meeting. The pencils were printed "Soil Conservation Pays—Compliments of Clinton County Banks."

THEY'LL SEE US EACH MONTH.—In cooperation with local bankers, the supervisors of the South Jersey Soil Conservation District have obtained funds for a year's subscription to *SOIL CONSERVATION Magazine* for each cooperator in the district.

NATION-WIDE CONSERVATION TOUR.—Connecticut has just come up with it—the first Nation-wide conservation tour. It will be held in the summer of 1951 as part of the summer session at the University of Connecticut. Dr. Raymond Klenholz, forestry professor, will be in charge. It will take 25 men and women on a 12,000-mile swing—to California by the southern route, up the Pacific coast to Washington and back by a northern route—in

8 weeks. The group will travel by bus, with each member having a sleeping bag and waterproof shelter, which means that nights will be spent in State and National parks and forest camps. Through cooperation of Government and private agencies, travel will include areas not open to the general public. A traveling kitchen, accompanying the bus, with an experienced cook and trained dietitian in charge, will supply hot food. Students and teachers will make up most of the party. Students who fulfill requirements will receive six credits. Estimated cost, including food, lodging, transportation, tuition, and incidentals will be \$400. Dr. Klenholz taught in Illinois and the Philippines, held a Sterling fellowship in forestry at Yale and was State forester in Connecticut for 4 years. He has traveled widely, done research in forestry and botany in six States, and in 1947 drove his son and daughter over much of the route that is to be covered by the tour.

TOP PERFORMANCES RECOGNIZED.—At the Fourth Honor Awards Ceremony of the Department of Agriculture in Washington, D. C., May 25, six members of the Soil Conservation Service received Superior Service Awards:

Fred W. Blaisdell, Minneapolis, Minn., for developing and perfecting the hydraulic design for structures used in soil conservation and water-control programs.

Henry Howard Finnell, Goodwell, Okla., for his contribution to the agriculture of the Southern Great Plains, particularly for development of wind-erosion control methods in semiarid areas.

Duthiel W. Fortenberry, Tylertown, Miss., for helping to develop a permanent-type agriculture based on good land use in the Walthall County Soil Conservation District.

David H. Foster, San Antonio, Tex., for developing new and improved plants for use in soil and moisture con-



Foster . . . Klingebiel . . . Fortenberry . . . Chief Bennett . . . Finnell . . . Blaisdell . . . Saveson

WOODS DATA.—In a study of 115 dairy farms in Vermont, Dr. Robert Carter, University of Vermont, found cordwood being grown about five times as fast as it is being cut, while saw timber is being removed about twice as fast as it grows. Wood lots are seriously understocked, partly due to grazing and inclusion of areas of old pasture being reconverted to woods. Farmers averaged \$1.34 per hour labor return for forestry work over and above taxes, interest, depreciation, and other costs. The return per hour for labor on farms with small wood lots is smaller than the return on farms with larger wood lots. Farmers' valuation of wood lots average \$19 per acre, with \$46 per acre as their valuation on sugar bushes. Country foresters value all wood lots at \$27 per acre. Labor returns per hour for different wood products ranged from \$1.03 for sugar wood, \$1.05 for pulpwood, and \$1.08 for fence posts to \$1.30 for maple sirup, \$1.51 for stovewood and \$1.90 for sawlogs.

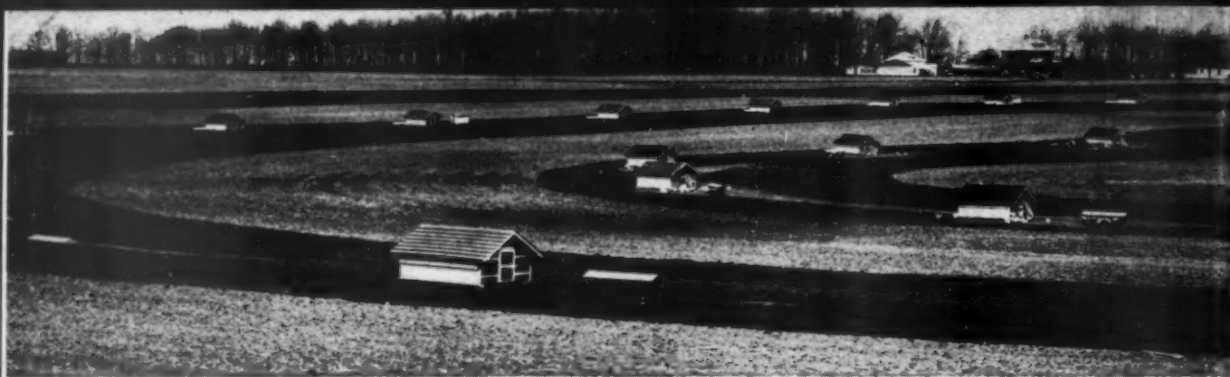
servation, and for educational and informational activities creating public interest in grasses.

Albert A. Klingebiel, Champaign, Ill., for leadership in developing techniques and procedures of presenting land-capability information to farmers, coordinating soil conservation survey activities, and training SCS workers.

Irwin L. Saveson, Baton Rouge, La., for designing an improved system of field drainage for sugarcane land and developing efficient methods of constructing drainage works.

For more than 40 years of work, Lewis A. Jones, chief of the water conservation and disposal practices division, received a Length of Service Award.

At a later date, awards will also be made to the Perry, Okla., and the Purcell, Okla., work units for outstanding accomplishments in the Noble County and Canadian-Walnut Soil Conservation Districts.



CHICKENS ON CONTOUR.—On Guy Leader's poultry farm near Shrewsbury, York County, Pa., range shelters are contoured on strips nearly a mile long. Leader, a Pennsylvania State Senator, owns and operates six poultry farms, each under a complete conservation farm plan prepared by SCS technicians. The dark strips are in Ladino clover and timothy. The open strips have been plowed for corn.

York County has more than 1,100 complete conservation farm plans established on the land. The York County Soil Conservation District has been operating for nearly 12 years. At many points, as far as the eye can reach, only conservation farming can be seen.

BANKERS OFFER AWARDS.—Recognition is to be given Monroe County, Wis., farmers who have become cooperators with the Monroe County Soil Conservation District during 1950. The Monroe County Bankers Association will reward each farmer participating with a subscription to SOIL CONSERVATION Magazine.

The bankers association, which includes all of the banks in Monroe County, is using this method to show appreciation of farmers following soil-conserving practices.

SONG OF SOIL.—During his work as a soil conservationist in Oklahoma, Walter A. Groom wrote a poem entitled "At the Foot of a Hill." The poem told the story of conservation so vividly that W. B. Russell, another soil conservationist of Kootenai County, Idaho, made type-written copies and sent it out to his agricultural friends. A copy was also sent to Ernie Jorgenson, farm editor, KXLY, Spokane, Wash., who suggested that Clyde and Pal, hillbilly singers, set the words to music. Composer Del Yandon was called to assist and the song was written and presented for the first time on the air by Clyde and Pal, March 9, 1950.

GOOD IN ANY LANGUAGE.—Bob Anderson, work unit conservationist with the South Goodhue (Minn.) Soil Conservation District, has written what is believed to be the first farm plan for translation into Norwegian.

The plan is for Einar Lomen, who arrived recently from Norway to take over a 168-acre farm which he inherited. The farm was so poor and run-down that Lomen despaired of making a living on it. On looking for assistance he was

directed to the soil conservation district office and Bob Anderson.

The plan Bob worked out was of no use to Lomen; he couldn't read a word of English. So Alf Larson, principal of the Wanamingo schools and a native of Norway, translated the plan into Norwegian. With the plan in hand, Lomen hopes to be a success as a farmer and as an American.



Tom Stolen looking over plan with Bill Clark (left) and Jack Densmore.

WINNING COUPLE.—The 1950 W. G. Skelly award for superior achievement in agriculture went to Tom and Thelma Stolen of Cottage Grove, Wis., in the Dane County Soil Conservation District.

Tom and Thelma were selected by a committee of 10 farm leaders on the basis of successful production on 144 acres. Soil conservation is a "must" with the Stolens because the soil on their farm isn't the world's best. Tom is never too busy to show or tell other farmers about soil conservation. His entire farm has been terraced or strip cropped. All waterways are grassed, 28 acres of pasture have been renovated. Land use on the Stolen farm has been completely changed since he signed an agreement with the district 8 years ago.

The influence of the Stolen family is extensive. Hundreds of touring farmers, as well as numerous writers and photographers, have visited the farm in quest of ideas and encouragement.